

Dragonfly Gazette

GEORGIA PROJECT WET Environmental Protection Division

August 2015

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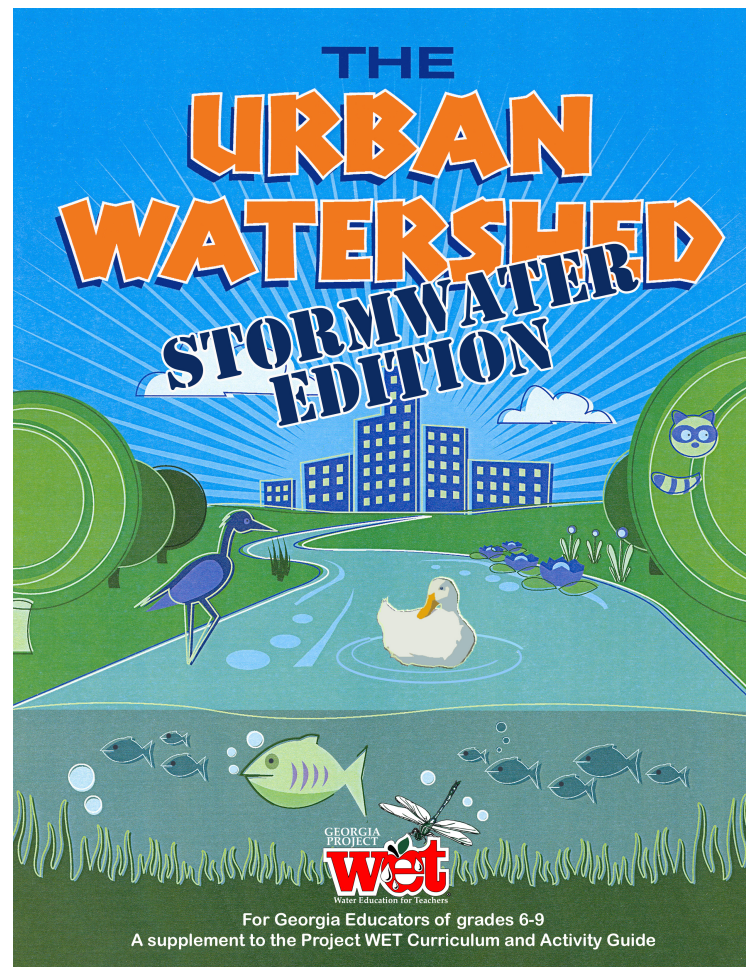
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Introducing The Urban Watershed - Stormwater Edition!



**GA Project WET is pleased to announce the publication
of our new supplemental curriculum:
The Urban Watershed - Stormwater Edition!**

Some of you may be familiar with the original Urban Watershed Guide, developed in partnership with the city of Atlanta in 2005. This new guide is:

- Updated and revised for state-wide use with several new activities
- Supplemental to Project WET and designed to be used alongside WET activities
- Available only through a Project WET workshop or to those trained in WET
- Additional resources and live links available online
- Standards-based and aligned to Georgia and national standards

Georgia WET Facilitators will be offering WET/Urban Watershed workshops soon. For those of you who are already WET trained and would like a copy, please [contact us](#).

What is URBAN STORMWATER?

With stormwater we think FLOODS, EROSION, AND RUNOFF. In an urban environment stormwater can quickly accumulate. Any precipitation that does not soak into the ground becomes surface runoff when it flows across streets and rooftops. And of course when the ground is saturated and infrastructure is overloaded the effects can be dramatic.



Urban stormwater is of concern for two main reasons:

1. Increased volume of runoff water leads to flooding and erosion.

2. The water can pick up heat and contaminants as it travels across the city and carry them into the rivers and streams.

What happens to all this Stormwater?

Most of us don't realize that the runoff either flows directly into rivers and streams or is channeled into storm sewers, which eventually discharge to surface waters! What the stormwater runoff carries with it enters the waterways too. Uncontrolled urban stormwater can adversely affect fish, wildlife, plants, and even our drinking water supply.

Urban threats to Water Quality

Certain situations exist in an urban watershed that can threaten our water quality and wildlife habitats when it rains.

Point and Nonpoint Source Pollution



As the water flows through the urban environment some of the pollutants it gathers can be identified and the source found, such as a direct pipe into a stream. This is known as **Point Source Pollution** and most is heavily controlled by laws and permits.

The majority of pollutants that enter our waters, however, come from unidentified sources. They could be anything from fertilizers, detergents, construction run off, sediment, oil, grease, pet waste to pesticides but it is hard to tell exactly where they originated. **This is called Nonpoint Source Pollution.**



Building on the land

The soil does a remarkable job of filtering out contaminants. But once buildings and pavement are introduced, less water is able to penetrate the soil. When vegetation is cleared for construction, it decreases a watershed's capacity to capture moisture, increasing the amount that runs off. The loss of vegetation also destabilizes stream banks and reduces the shade produced by the canopy.

Impervious Surfaces



As a watershed area becomes more populated, natural surfaces that absorb water and recharge ground water supplies, are covered with hard, impervious surfaces (streets, sidewalks, rooftops, driveways, and parking lots).

And then there is Climate Change . . .

According to the EPA our region is likely to experience the effects of climate change as the “redistribution of water” brings increased extreme weather events to this region in the coming years, potentially increasing runoff and the problems it brings.

For more:

EPA Report: <http://www.epa.gov/climatechange/impacts-adaptation/southeast.html>

Third U.S. National Climate Assessment (NCA) <http://nca2014.globalchange.gov/>

USGS Report: <http://pubs.usgs.gov/fs/2010/3016/>

What can We do?

We can educate ourselves and others on how to protect our own watersheds. A GOOD PLACE TO START: Tackle nonpoint source pollution! It poses a serious threat to the health of urban watersheds but it results from an accumulation of many small actions. Maybe you can organize a cleanup with [Rivers Alive](#) and of course, use Project WET with your students whenever you can!

How do YOU get a copy of The Urban Watershed - Stormwater Edition?

If you have you taken a Project WET workshop in the last 3 years just email us with your request and address! [Urban Watershed Guide](#)
If not, check out the workshops listed on eeingeorgia.org in your area.

WET in the Classroom

Use Project WET and The Urban Watershed, to explore this topic with students.

The Urban Watershed - Stormwater Edition contains 4 sections to introduce students through fun activities to:

- Natural and Urban Watersheds
- Stormwater and Where it Goes
- Stormwater Management
- Taking Stormwater Action

It also includes background information, a glossary and an extensive resource section.

In addition, our companion website provides

- live resource links
- standards correlations
- stormwater curricular framework and objectives
- Project WET Activity stormwater extensions to accompany the activities in this guide



Aqua Duck will be your guide to Urban Watershed history and STEM Education throughout.

Here are just a few of the activities in this new guide:

What's Your Standard? – Students simulate a drinking water treatment process in order to better understand the effort and cost involved in meeting water quality standards.

Dr. Runnov – Students will hear from an "expert" about some basic ideas on the connection between increased stormwater and climate changes.

Greening the Asphalt - Students will experience the dilemma of being a city planner and making decisions which balance green space and pervious surface with hardscape in a card game that develops a new eco-friendly corridor in the city.

To find more Project WET workshops visit EEinGeorgia.org

[TOP](#)

Walk the Talk – Students take actions at home and school that protect the quality of water in the Urban Watershed.

CHECK THIS OUT! The Project WET Portal also contains stormwater extensions to many of its activities. Use the code printed on the back or inside cover of your Project WET 2.0 Guide to register for free, unlimited access to the portal. portal.projectwet.org

Visit DiscoverWater.org to create clean water campaign posters and students can get into ACTION EDUCATION!



Happy News! Georgia students won big at the National level in River of Words again this year. We had 1 National Grand Prize Winner in Poetry, 1 National Finalist in poetry and 12 National Finalists in art! In addition, 27 Georgia art and 19 Georgia poetry winners were selected by the State judges. Each of the students and their teachers were honored at the 2015 Georgia River of Words Ceremony at the Decatur library earlier this month. Congratulations to all of the winners in this year's contest!

See the winning entries [here](#).

Get your students involved this year! The deadline for entries is December 1. [GAProjectWET.org/River of Words](http://GAProjectWET.org/RiverofWords)



With great pride we announce our:

1. 2015 Project WET School of the Year--

- Clark Creek Elementary STEM Academy in Acworth

2. 2015 Project WET Educator of the Year--

- Tammy Hyder of East Coweta Middle School

3. 2015 Project WET Facilitators of the Year--

- Marilyn Hall and
- Laurie Loftin of Athens-Clarke Co Conservation Office

Congratulations! These very special friends were honored at the EEA Conference in March.

Nominate someone you believe in:

 [Nomination](#) (pdf form)



Water We Singing About?

Our colleague, the New Jersey Project WET coordinator, Kevin Kopp has started a Kickstarter Campaign to produce a CD of water education, kid-friendly songs about water. Each song is connected to a Project WET activity and are fun and easy to sing. Donors of \$25 or more will receive a copy of the CD (deadline is 10/5). Here is how you can help make it happen:

<https://www.kickstarter.com/projects/1624644223/water-we-singing-about?>



Outdoor Learning Symposium registration now open!

Join educators from around the state at the annual Outdoor Learning Symposium on Friday, November 13 at the Fortson 4-H Center in Hampton. Session themes include: Creating Sustainable Outdoor

Learning Areas, Taking STEM Outdoors, and Techniques & Strategies for Outdoor Learning.

Registration information:

<http://www.eealliance.org/outdoor-learning-symposium>



Have you seen our searchable database for Standards?

With the standards database, all of the correlations are easy to access for WET 2.0 activities covering Georgia and National subject area standards.

[Try it out!](#)

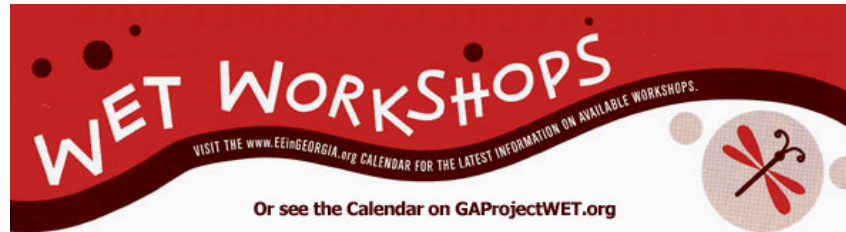


Fifth grade classes near Albuquerque, New Mexico, are looking for partners to exchange information about rivers and their watersheds!

RiverXchange is a FREE year-long program focused on communication between classes around the world about water resources issues. Our hands-on lessons can be used for reference, to enhance your existing curriculum, or as a complete program that explores rivers, watersheds, stormwater, municipal water supplies, ecology, and conservation.

Students communicate 4 times throughout the school year on a private website. We provide training and support to ensure a successful experience. Through writing and creative sharing about rivers, we integrate science with language arts, social studies, and 21st-Century learning skills, all correlated to Common Core Language Arts Standards!

Check out the public website, www.RiverXchange.com, for more information and to access the registration form.



Find more workshops on [EE in Georgia!](http://www.EEInGEORGIA.org)

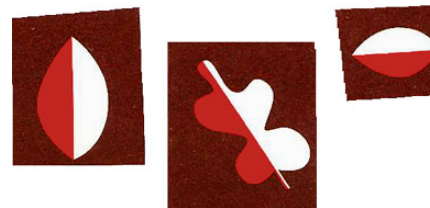
Projects WET, WILD and Learning Tree Educator Workshop

Monday and Tuesday November 9-10, 2015
8:00-5:00 each day

Fortson 4-H Center
Hampton, GA

Full registration (includes all meals and 2 nights lodging): \$145
One night registration (includes Monday meals and lodging and Tuesday breakfast and lunch): \$130
Days only registration (includes Monday and Tuesday breakfast and lunch): \$115

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